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EXAMINER

CRAVER, C

ART UNIT

PAPER NUMBER

2744

DATE MAILED: 06/21/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/039,010

Applicant(s)
Leung et al

Examiner
Charles Craver

Group Art Unit
2744



☒ Responsive to communication(s) filed on Mar 28, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-12 and 14-28 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 21 and 22 is/are allowed.

☒ Claim(s) 1-12, 14, 16, 18, 20, and 23-27 is/are rejected.

☒ Claim(s) 15, 17, 19, and 28 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 recites the limitation "the MSC" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 6, 8, 23, 25 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Heidari, US Pat 5,854,978.

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Regarding claim 6,

Heidari discloses a wireless communication system comprising:

first means, including stored operational parameters, for providing mobile communications (col 4 line 19-col 5 line 8);

base station means (12) and, inherently, MSC means for communicating with said first means (col 3 lines 16-30); and

over the air administration means for network initiating the alteration of said operational parameters stored in said first means(col 5 line 60-col 6 line 27).

Regarding claim 8,

Heidari discloses a wireless communication system comprising:

Mobile station means in contact with at least one base station;

storage means for storing operational parameters, in said mobile station (col 4 line 19-col 5 line 8);

base station means (12) and, inherently, MSC means for communicating with said first means (col 3 lines 16-30), providing a network; and

network initiated means for altering said operational parameters stored in said storage means in accordance with data transmitted to said mobile unit in an administration process (col 5 line 60-col 6 line 27).

Regarding claim 23,

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Heidari discloses a method of supplying data to be used in a network initiated over the air updating of operational parameters in a wireless communication system mobile station comprising the steps of:

- paging a mobile station from the network base station;
- setting an administrative updating indicator in the mobile station in accordance with a received message (col 5 line 60-col 6 line 5); and
- updating operational parameters in the mobile station in accordance with data received (col 6 lines 6-27).

Regarding claim 25,

Heidari further discloses that said data such as said programming may be transmitted on an assigned traffic channel (col 3 lines 31-38 and col 6 lines 3-5).

Regarding claim 27,

Heidari discloses a method of supplying data to be used in a network initiated over the air updating of operational parameters in a wireless communication system mobile station comprising the steps of:

- paging a mobile station from the network base station;
- supplying an administrative updating indicator in the mobile station in accordance with a received message (col 5 line 60-col 6 line 5); and
- updating operational parameters in the mobile station in accordance with data received (col 6 lines 6-27).

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah in view of Heidari.

Regarding claim 1,

Shah discloses a method for a network to initiate the updating of operational parameters in a mobile station comprising the steps of

locating an MCS, BS and MS being served by the BS (FIG 1, col 2 lines 9-21);

paging a mobile station from the network, inherently from a base station;

assigning a traffic channel to the mobile station in response to an acknowledgment of the page (col 8 lines 17-30);

conveying operational parameters from an OATF entity to the MS, inherently via the MSC; and

updating operational parameters in the mobile station in accordance with data received on the assigned traffic channel (col 8 lines 31-48, col 6 lines 41-44 and 49-53, col 7 lines 18-44).

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Shah does not disclose that the mobile station responses are modified in accordance with a parameter updating indicator.

Heidari discloses that it is useful, in updating a mobile stations operational parameters via a base station, to modifying the mobile station responses to received traffic channel messages in accordance with a parameter updating indicator received from the network (col 6 lines 6-15). Therefore, it would have been obvious to one skilled in the art to add such a function to Shah, as it would alert a user that an update is to occur, and thus forgo any inconvenience that may be caused when the update occurs by allowing the user to end a call. Further regarding claim 2, it would also be obvious in such a situation that said traffic channel would then be released after updating was finished, as there would be no need to keep a traffic channel open if the phone is no longer in use, and Shah suggests that the process be terminated after the update (col 8 lines 40-42).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shah in view of Heidari as applied to claim 1 above, and further in view of Mizikovsky, US Pat 5,943,425.

While disclosing applicants invention of claim 1, Shah in view of Heidari does not disclose a validation step comparing an internally generated signature with a received signature.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the

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home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Shah in view of Heidari.

The motivation behind such a combination of references would have been to increase security. Shah in view of Heidari teaches it is useful to update a mobile stations memory at times, and to first authenticate a users phone by “standardized authentication procedures” (col 8 lines 17-22). Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Shah in view of Heidari would increase security measures and reduce theft.

9. Claims 4, 5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari in view of Mizikovsky.

Regarding claim 4,

Heidari discloses a method of supplying data to be used in a network initiated over the air updating of operational parameters in a wireless communication system mobile station using a traffic channel comprising the steps of:

alerting a mobile station to an administrative update (col 5 line 60-col 6 line 5); and

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updating operational parameters in the mobile station in accordance with data received on the assigned traffic signaling channel upon the acceptance by said mobile station (col 6 lines 6-27).

Heidari does not disclose a comparison of a mobile station signature and network signature.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

Regarding claim 5,

Heidari further discloses that said alerting comprises the use of a unique command word (reads service option indicator, col 5 lines 60-67).

Regarding claim 10,

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Heidari discloses a method of updating operational parameters in a mobile station of a wireless communication network comprising the steps of:

paging a mobile station with a network initiated update request (col 5 line 60-col 6 line 5);
updating operational parameters in said mobile station from network received data (col 6 lines 6-27); and

inherently, returning said mobile station to a status that is other than update status.

Heidari does not disclose steps of correlating network data with mobile station data for validating network authority.

Mizikovsky discloses a method for updating data in a mobile station comprising correlating a network challenge received by the network from said mobile station with network stored data for validating the network authority to update, correlating a challenge response from the network with mobile station stored data before accepting update data in said mobile station, and then updating said mobile station data (col 4 line 48-col 5 line 35).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

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Regarding claim 11,

Heidari further discloses that said alerting comprises the use of a unique command word (reads service option indicator, col 5 lines 60-67) to set the mobile unit into a programming mode.

Regarding claim 12,

Heidari discloses mobile station means comprising:

over the air functional entity means for receiving programming instructions and data via a traffic signaling channel; and

means for storing over the air received update data (col 5 lines 25-40 and 60-col 6 line 5).

Heidari does not disclose identity validation means.

Mizikovsky discloses mobile station means (12a) for receiving data via a traffic signaling channel and storing said data, further comprising means for validating the identity of a network service provider, attempting to initiate over the air programming of the mobile station, before allowing update data to be stored (col 4 lines 21-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

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10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 6 above, and further in view of Mizikovsky.

While disclosing applicants invention of claim 6, Heidari does not disclose a validation means in said first means.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 8 above, and further in view of Mizikovsky.

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While disclosing applicants invention of claim 8, Heidari does not disclose a validation means in said first means.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

12. Claims 14, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry, Jr et al (Henry), US Pat 5,603,084 in view of Cyr et al (Cyr) US Pat 5,890,075.

Regarding claims 14 and 18,

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Henry discloses means for performing a method of alerting a wireless communication network that an attempt to update operational parameters in a mobile station has failed comprising:

means for performing a step of setting an over-the-air parameter administration pending flag; and

means for performing a step of storing an over-the-air functional flag (reads address) for reinitiating the update process (col 10 lines 17-29).

Henry does not disclose that said flag and address may be stored at the network.

Cyr discloses a method of alerting a wireless communication network that an attempt to update operational parameters in a mobile station has failed comprising:

storing a status report showing an over-the-air parameter administration pending status and an over-the-air functional status for reinitiating the update process (col 4 lines 36-58).

It would have been obvious to one skilled in the art at the time of the invention to add the function of Cyr to the invention of Henry.

Henry teaches it is useful to track the status of the updating of the memory of a mobile station; Cyr teaches it is useful to track the status of many mobile stations at the network so as to facilitate a more efficient updating procedure for a plurality of mobile stations. Thus, adding the function of Cyr to Henry would allow the status of many mobile stations to be kept, rather than at each individual mobile station, for better network management.

Further regarding claims 16 and 19,

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Cyr further discloses that said pending status is set in conjunction with data at the MSC which shows that a mobile station update has not yet been completed (col 4 lines 36-53).

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 23 above.

While disclosing applicants invention of claim 23, Heidari does not disclose that the setting and updating are performed on the paging channel.

However, it was well known at the time of the invention to transmit data on a paging channel between a base station and a mobile unit. The examiner takes official notice as such. It would have been obvious to use a paging channel, in the case of a small update of data, as such a step may save bandwidth by avoiding a high-bandwidth traffic channel.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 23 above, and further in view of Mizikovsky.

Heidari discloses applicants invention, except steps of comparing a mobile station internally generated secret word with a secret word received from the network.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile stations internally generated secret data with a traffic channel received secret datum where the received data is derived from data stored at the home network of the mobile station, and said step is performed prior to the updating step (col 4 lines 48-67).

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It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

Allowable Subject Matter

15. Claims 15, 17, 19, 21-22 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter:

Claims 15 and 19 teach towards an apparatus and method for alerting a network that an attempt to update data in a mobile station has failed, wherein said network sets a flag showing an update is pending (i.e. not completed), and a flag for reinitiating the update process, and setting said first flag in conjunction with HLR data when said mobile station is not available. While the prior art shows an HLR which may be used in such a system (see Mizikovsky), the prior art does not teach or suggest setting an update pending flag in conjunction with data from said HLR when a mobile unit is not available.

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Claims 17 and 28 teach towards an apparatus and method such as that taught in claim 16, wherein when an update is not completed in a predetermined way, said flag indication is transferred to the HLR in the system.

Claims 21 and 22 teach toward a method and apparatus for validating a mobile station for the purpose of updating data in said mobile station, wherein said mobile station generates a secret word which is a combination of a first and second word inside said mobile station, and wherein a second secret word is generated, derived from network data, said second secret word being a combination of the first two combined words and a copy of the first word, supplying said second secret word to the mobile station, and comparing said secret words (first and second) within said mobile station. The prior art teaches the use of secret data, but does not disclose or suggest the extra steps in the validation process taught by the applicant.

Claims 15, 17, 19, 20-21 and 28 are neither taught nor suggested by the prior art.

Response to Arguments

Applicant's arguments towards claim 1 have been noted but are moot in view of the new grounds of rejection. Regarding applicant's statements towards Heidari with regards to claims 6, 8, 10, 12, 23 and 27, applicant puts forth that it is indeed the network which initiates the updating of parameters via an MSC. However, claims 8, 10, 12, 23 and 27 do not even recite an MSC, and in claim 6, where an MSC is recited, it is not positively stated that the MSC is the entity which causes the update. The network formed by the base stations of Heidari could easily be construed

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as the “network” of the present invention in such a case. Further, the examiner disagrees that the invention of Heidari could not be modified so as to allow an MSC-based network to provide such programming. Heidari discloses that the base stations may communicate with each other via switching means (col 3 lines 16-25). Further, the use of MSCs in cellular systems were very well known in the art at the time of the invention, and often communication functions were moved to such a switching center to ease the burden on base station controllers, and provide more central access to user information. Further, although Heidari discloses updating DSP programs for speech compression and the like, the examiner upholds that such programming may be read as operational parameters, as the programming of the system of Heidari changes parameters basic to the operation of the device. Although Heidari does not expressly disclose that the DSP programs determine which control channels are to be used, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Guens*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further, towards claims 1, 10, 23 and 27, the examiner upholds that the initiation by the base station of the programming, i.e. the transmission of a command word, reads a page from the base station. Whether or not the base station knows the location of the mobile station is moot, in that such a limitation is not present in the claimed invention.

Regarding applicants further statements towards the handover of Heidari, Heidari also suggests, as cited previously (col 5 line 60-col 6 line 5), that the response to the page in the

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mobile station may be to signify that a control signal or voice message is present to be received. This suggests that updating may occur in presence or in absence of a call; a control signal may be used when a voice signal is present on the channel, or a voice message may be used when the phone is not using the channel for voice communications, i.e. at idle. Thus, in the case of using a voice message to transmit the information, the channel would obviously be deallocated after the message is received, as is the case in cellular systems when a voice message is communicated.

Regarding applicants statements towards claims 3, 4, 10, 12, 13 and 26, Mizikovsky is used as a combinatory reference; the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Mizikovsky is merely used to demonstrate the utility of authenticating a user prior to prevent unauthorized programming, an obvious security feature in a system which, if such a feature was lacking, would be insecure and easily tamperable. Such a deficiency would not be desired by a user of such a network.

Regarding applicant's statements towards claims 14 and 18, the applicant has not made it clear how the combination of Henry and Cyr would destroy the functionality of Henry. Henry discloses that it is useful in the updating of parameters in a cellular phone to provide a flag which discloses if a programming download was successful, and that the flag is used in the re-initiation

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of said download. Cyr is used to demonstrate the utility of storing such information at a network, as it allows the network to track many users.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. **Any response to this final action should be mailed to:**

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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or faxed to:

(703) 305-9051, (for formal communications; please mark "EXPEDITED
PROCEDURE")

Or:


(703) 305-9051 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal
Drive, Arlington, VA., Sixth Floor (Receptionist).


19. Any inquiry concerning this communication or earlier communications from the examiner
should be directed to Charles Craver whose telephone number is (703) 305-3965.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
Dwayne Bost, can be reached on (703) 305-4778.

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Group receptionist whose telephone number is (703) 305-3900.


C. Craver
June 19, 2000

CHARLES CRAVER
PATENT EXAMINER


DWAYNE D. BOST
SUPERVISORY PATENT EXAMINER
GROUP 2700